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10/550,543	09/26/2005	Susumu Murakami	0951-0171PUS1	1934

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EXAMINER	
PHAM, ANDY L	

ART UNIT	PAPER NUMBER
2854	

NOTIFICATION DATE	DELIVERY MODE
11/08/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/550,543

Applicant(s)

MURAKAMI ET AL.

Examiner

Andy L. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Higeta et al. USP 5,162,857.

3. Regarding claim 1, Higeta et al. teaches an image forming apparatus that has a duplex printing function, wherein while transporting a recording medium, after recording an image formed on an image carrier to a first side of the recording medium, this recording medium is re-transported towards the image carrier and an image formed on the image carrier is recorded on a second side of this recording medium that differs from the first side, the image forming apparatus comprising:

a switching means (skew roller **102**; Col 4, line 21) for switching the transport position of the recording medium when recording the image on the recording medium, such that it differs in the direction perpendicular to the recording medium transport direction when recording the image on the first side and when recording the image on the second side (Col 4, lines 43-59).

Regarding claim 2, Higeta et al. teaches the image forming apparatus according to claim 1, wherein the transport position of the recording medium when recording the image on either the first side or the second side of the recording medium is set to a

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paper passage standard position of the recording medium on the image carrier (position 3-1 and position 3-2; See **Figure 13**).

Regarding claims 4 and 9, Higeta et al. teaches wherein the image forming apparatus comprises an optical unit (**405**; See **Figure 9**) that writes image information on the image carrier; and

when writing image information on the image carrier, the optical unit separately sets an image information writing point for recording the image to the first side of the recording medium, and an image information writing point for recording the image to the second side of the recording medium (Col 4, lines 43-59).

Regarding claim 5, Higeta et al. inherently teaches that the optical unit must set a timing for writing the first and second images onto the image carrier so that the images can print on the first and second sides of the medium, respectively (Col 4, lines 43-59).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 7, 8, 10, 15, 16, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higeta et al. USP 5,162,857, in view of Kodama JP 04208949.

Regarding claims 3 and 8, Higeta et al. teaches all the limitations of claim 1 for reasons above. Higeta et al. also teaches wherein the transfer position of the recording medium when recording an image on the recording medium is switched by an offset function of the switching means.

However, Higeta et al. does not teach the image forming apparatus further comprising a discharge portion for discharging the recording medium on which the image has been printed;

Wherein the switching means has an offset function, provided in this discharge portion, that varies the discharge position of the recording medium that is discharged.

Kodama teaches a discharge portion (ejecting rollers **21** and **22**) for discharging the recording medium on which the image has been printed;

Wherein the switching means has an offset function, provided in this discharge portion, that varies the discharge position of the recording medium that is discharged (**Abstract**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had a discharge portion as taught by Kodama in the image

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forming apparatus of Higeta et al. for the purpose of discharging the recording medium in varying positions.

Regarding claim 10, Higeta et al. teaches wherein the image forming apparatus comprises an optical unit (**405**; See **Figure 9**) that writes image information on the image carrier; and

when writing image information on the image carrier, the optical unit separately sets an image information writing point for recording the image to the first side of the recording medium, and an image information writing point for recording the image to the second side of the recording medium (Col 4, lines 43-59).

Regarding claims 7, 15, 16, 17, 18, Higeta et al. discloses the claimed invention except for wherein the transfer position of the recording medium is switched such that it differs when recording an image to the first side and when recording an image to the second side, and satisfies the relational expression

$$(\text{Distance of change in the transport position}) < [(\text{width of the image carrier}) - (\text{maximum width of the recording medium used for printing})] / 2.$$

It would have been obvious to one having ordinary skill in the art at the time the invention was made to switch the transfer position of the recording medium within this range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 6, 11, 13-14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higeta et al. USP 5,162,857, in view of Kimoto USP 6,424,365.

Regarding claims 6, 11, and 13-14, Higeta et al. teach all that is claimed except wherein the transfer position of the recording medium is set to a region in which it is possible to operate a plurality of transfer rollers disposed in the transfer path of the recording medium, the image carrier, a fixing mechanism, a transfer mechanism, and a developing mechanism disposed in the vicinity of the image carrier, various charging mechanisms, and a cleaning mechanism.

Kimoto teaches wherein the transfer position of the recording medium is set to a region in which it is possible to operate a plurality of transfer rollers (paper feed rollers **51**, **52**, and **53**; Col 4, line 58) disposed in the transfer path of the recording medium, the image carrier (photosensitive drum **20**), a fixing mechanism (heat roller **44** and pressure-contact roller **45**; Col 4, lines 50-51), a transfer mechanism (transfer rollers), and, a developing mechanism (developer **22**; Col 3, line 27) disposed in the vicinity of the image carrier, various charging mechanisms (charger **21**; Col 3, line 27), and a cleaning mechanism (cleaner **25**; Col 3, line 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the conventional parts of the image forming apparatus (for example, various charging mechanisms and cleaning mechanism) as explicitly taught by Kimoto in the image forming apparatus of Higeta et al. for the purpose of printing first and second images on a first and second side of a print medium, respectively.

Regarding claim 19, Higeta et al. discloses the claimed invention except for wherein the transfer position of the recording medium is switched such that it differs when recording an image to the first side and when recording an image to the second side, and satisfies the relational expression

$$(\text{Distance of change in the transport position}) < [(\text{width of the image carrier}) - (\text{maximum width of the recording medium used for printing})] / 2.$$

It would have been obvious to one having ordinary skill in the art at the time the invention was made to switch the transfer position of the recording medium within this range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higeta et al. USP 5,162,857, in view of Kodama JP 04208949, as applied in claims 1 and 3, further in view of Kimoto USP 6,424,365.

The combination of Higeta et al. and Kodama teach all the limitations of claims 1 and 3 for reasons above except for wherein the transfer position of the recording medium is set to a region in which it is possible to operate a plurality of transfer rollers disposed in the transfer path of the recording medium, the image carrier, a fixing mechanism, a transfer mechanism, and a developing mechanism disposed in the vicinity of the image carrier, various charging mechanisms, and a cleaning mechanism.

Kimoto teaches wherein the transfer position of the recording medium is set to a region in which it is possible to operate a plurality of transfer rollers (paper feed rollers **51**, **52**, and **53**; Col 4, line 58) disposed in the transfer path of the recording medium, the image carrier (photosensitive drum **20**), a fixing mechanism (heat roller **44** and pressure-contact roller **45**; Col 4, lines 50-51), a transfer mechanism (transfer rollers), and, a developing mechanism (developer **22**; Col 3, line 27) disposed in the vicinity of the image carrier, various charging mechanisms (charger **21**; Col 3, line 27), and a cleaning mechanism (cleaner **25**; Col 3, line 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a plurality of transfer rollers as taught by Kimoto in the modified image forming apparatus of Higeta et al. and Kodama for the purpose of printing first and second images on a first and second side of a print medium, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy L. Pham whose telephone number is 571-270-1877. The examiner can normally be reached on Monday-Friday 7:30-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALP

AP-


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